

Understanding Arbitrage

California Debt and Investment Advisory
Commission

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The Big Picture



Project
Management
Analysis



Data
Management

Information
People Count

Project
Management

Analysis

\$5,884,231.96 \$57,328.27

\$2,512,769.93 \$23,140.96

\$78,342,763.81 \$680,271.18

\$978,724.67 \$8,714.92

\$439,427.98 \$4,723.12

\$206,654.58 \$2,168.93

\$5,558,231.53 \$51,678.63

\$3,758,032.47 \$31,740.92

\$312,561.45 \$2,567.10

\$17,456,819.27 \$150,240.68

\$1,567,018.07 \$9,879.14

Data
Management

\$9,532.96

\$1,002.27

Information

People Count

Financing Tools

Essential Service

*No Underlying
Revenue Stream*

Non-Essential Service

*Moderate Underlying
Revenue Stream*

Essential Service

*Strong Underlying
Revenue Stream*

**Schools
Police/Fire
Stations
Parks**

**Public
Buildings
(City Hall)**

**Golf Courses
Convention
Centers
Stadiums**

**Parking
Garages
Urban
Renewal**

**Water/Sewer
Utilities
Gas/Electric
Utilities**

Voter Approved

**G. O. Bonds
Land-Secured**

Direct Obligations

**COPs, POBs, TABs
Limited Tax Bonds
Double-Barreled Bonds**

Revenue Bonds

**Revenue Bonds
Project (Self-Supporting)
TABs**

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The Municipal Securities Market

- Over \$2.3 trillion debt 10 yr Avg %
 - New Money Bonds _____
 - Refunding Bonds _____
- Type of Debt
 - Tax-exempt _____
 - Taxable _____
- Coupon
 - Fixed Rate _____
 - Variable Rate _____
- Maturity
 - Long-term _____
 - Short-term _____

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Why Tax-exempt Debt Needs Additional Attention?

- All tax-exempt debt is subject to the arbitrage rebate and yield restriction requirements of the tax code.
- Some tax-exempt financings will meet an exception to the rebate regulations.
- Some tax-exempt financings will meet an exception to the rebate regulations but will still require a yield reduction payment.
- A small portion of tax-exempt financings will be selected for audit at which point proof that no payment is due will be required.

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Common Misconceptions

	TRUE	FALSE
Earning arbitrage is bad.		
Bond proceeds don't really need to be spent as long as they are invested below the bond yield.		
If proceeds are spent within three years the issue is exempt from rebate payments.		
A records retention policy of 7 years will satisfy the IRS.		
The IRS only audits issuers who don't pay the correct amount.		
I know I don't owe so it's a waste of money to do an rebate report.		
The IRS requires annual rebate reports.		
The fee for a rebate report must be paid from the general fund.		
The bonds have been advance refunded therefore the rebate requirement is complete.		
Depositing reserve fund proceeds into a money market is as good a place as any.		

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Two Sets of Rules

- Arbitrage Rebate
 - Requires arbitrage profits to be “rebated” to the federal government
 - Exceptions to Rebate
- Yield Restriction
 - Proceeds are prohibited to be invested above the bond yield
 - Exceptions to Yield Restriction

What is Arbitrage Rebate?



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Arbitrage is...

- The profit from buying something in one market and selling it in another.
- As it relates to the municipal bond market, arbitrage is the profit from borrowing funds in the tax-exempt market and investing them in the taxable market.

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Rebate means...

- Unless an exception is available, the IRS requires a payment to the US Treasury equal to all interest earned on bond proceeds in excess of the bond yield.
- Payments are due every five years and on final redemption date or maturity of the bond issue.

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Management

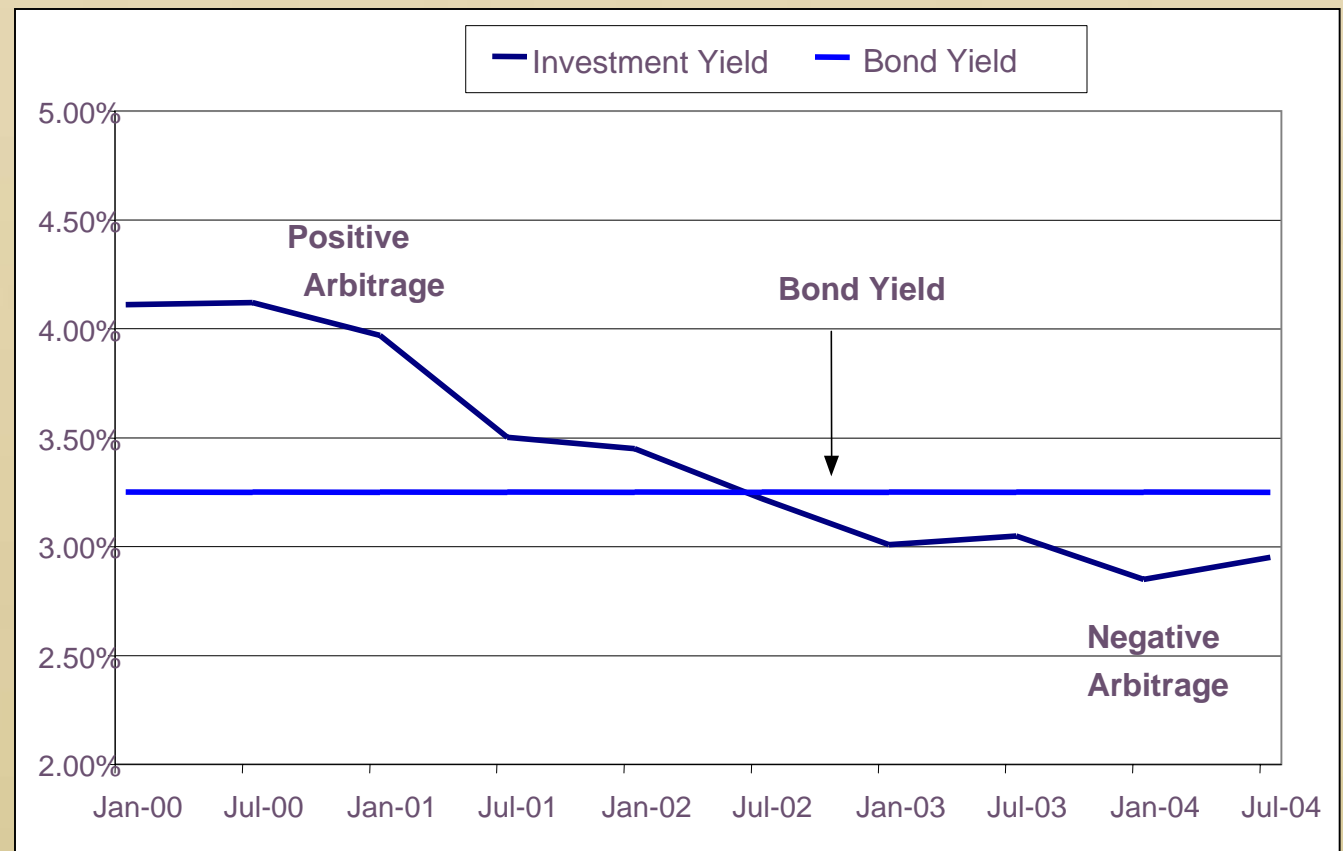
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Graphic Illustration of Arbitrage



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What is Yield Restriction?

- In general, gross proceeds may not be invested at a yield materially higher than the yield on the bonds.
- Exceptions to Yield Restriction:
 - Temporary Periods
 - Reasonable Required Reserve Fund
 - Minor Portion (Lesser of \$100,000 or 5 percent of proceeds)

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Illustration of Yield Reduction Payment

- Payments after temporary period is a yield reduction payment.
- Cannot blend negative rebate liability with positive yield reduction liability.
- Can blend positive rebate liability with negative yield reduction liability.

		Arbitrage Earned		
	Period	Example No. 1	Example No. 2	Example No. 3
Years 1-3	Unrestricted	\$10,000	(\$9,000)	\$8,000
Years 4-5	Restricted	\$5,000	\$7,000	(\$2,000)
Rebate Payment		\$10,000	\$0	\$6,000
Yield Reduction Payment		\$5,000	\$7,000	\$0

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Consequences of Noncompliance

- Stiff penalties are imposed if arbitrage payments are late or yield restrictions are violated.
- Non-payment of arbitrage rebate may affect the tax-exempt status of the bonds.
- IRS reserves the right to audit any tax-exempt bond for arbitrage rebate compliance even after the bonds have been fully redeemed.

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Advantages to Implementing an Effective Arbitrage Reporting Program

- Paying rebate means investment earnings are maximized, which provides additional funds to complete projects or to pay debt service.
- Being prepared for refinancings and IRS audits which can occur at any point during the life of the bond or beyond.
- Being in compliance with bond document covenants.

Managing Arbitrage Rebate Compliance



Project
Management
Analysis



4	594	\$1,112,864.34	\$10,273.45
1	1,528	\$439,427.98	\$4,723.18
1	1,204	\$206,617.58	\$2,168.11
10	1,238	\$5,558,231.45	\$5,610.11
7	1,762	\$3,758,122.37	\$2,168.11
1	1,238	\$312,561.45	\$1,002.27
12	58,642	\$17,456,819.27	\$150,240.68
5	37,853	\$1,567,918.07	\$9,879.14
811	1.45	\$9,532.96	
		\$1,002.27	

Data
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Post Issue Concerns

- Proceed Investment
 - Long vs. short-term goals
 - Using the regulations to your advantage
- Construction Projects
 - Meeting spending exceptions
 - Three year temporary period for unrestricted investment
- Arbitrage Rebate Liability Accrual
 - Frequency of computation
 - Fixed vs. Variable Rate Debt
- Records Retention Requirements
- IRS Audits and Enforcement Focus

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Get Organized

- Separate funds into individual accounts to gain the best arbitrage advantage.
- Establish a records retention policy that can be maintained for the life of the bond.
- Discuss with your “gatekeepers” critical transactions, red flags, and establish any additional reporting that may be helpful.

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Information

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Documents Needed to Prepare an Arbitrage Report

- Official Statement
- Tax Certificate
 - 8038G
- Trust Indenture
- Escrow Verification Report
(Refundings Only)
- Cash flow transactions
- Asset Statements

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Managing Your Rebate Program

- Establish good policies and procedures for managing your bond issues.
- Negotiate the provisions of the Tax Certificate.
- Stay organized.
- Maintain a rebate reporting schedule that allows time for decisions at critical junctures.

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Policies and Procedures

- Analyze activity on your bonds for all purposes, not just rebate.
- Maintain consistent procedures.
- Consult with Bond Counsel before making critical decisions relating to your tax-exempt debt, such as redeeming bonds early or changes in the use of proceeds or bond financed facilities.

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Negotiate the Provisions of your Tax Certificate

- Do not allow the drafter to routinely include boiler plate language in your Tax Certificate - make sure you understand the representations you are making and covenants you are undertaking.
- Be sure you agree with any and all special elections.
- Read the Tax Certificate.

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Stay Organized

- Track bond proceed investment and expenditures in detail.
- Avoid commingling funds whenever possible.
- Periodically verify Trustee held funds are being managed in accordance with the Indenture.
- Compute the arbitrage rebate liability at least every 5th bond year.
- Retain all records for the life of the bond, plus 3 years.

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Recommended Reporting Schedule

- Annual reporting on all variable rate issues and fixed rate bonds that have accrued liabilities.
- Initial calculation at the end of the first bond year to monitor special elections and optimize investment strategies.
- Review after year 3 when the construction fund must be yield restricted.
- Minimum reporting schedule - every 5 years.

Calculating Arbitrage Rebate



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Overview

- Section 148 is the principal Code section governing arbitrage rebate.
 - Other provisions are found in Section 103, 149 & 150
- The arbitrage regulations are over 300 pages in length.
- Specific requirements for applying the rebate rules are complex and often open to interpretation.

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Overview (cont.)

- The computation uses a “future value” method for computing arbitrage rebate.
 - Net investment cash flows associated with bond proceeds are future valued, using the bond yield and the same compounding intervals as the bond.
 - The future value of the investment earnings are compared to allowable earnings associated with the bond yield.

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Overview (cont.)

- The regulations require all transactions be at market rate.
- Issuers may not manipulate the rate in order to decrease the amount of receipts or increase the purchase price to avoid rebate.

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Valuation of Investment Receipts

- Fair Market Value Approach
 - Allows unrealized losses to be counted, thus reducing rebate.
 - Requires unrealized gains to be rebated.
- Present Value Approach
 - Future receipts are valued to the computation date using the purchase yield on the investment.
 - Assumes the investment will be held to maturity.
 - Amortizes investments from the purchase date to the computation date, and adds accrued interest.
 - More closely approximates the book value of investments as reported on financial statements.
 - May only be used for fixed rate investments.

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Computation of Bond Yield

- Fixed Rate Bond
 - Determined using the debt service requirements to maturity.
 - Under certain circumstances the debt service schedule must be adjusted for possible early retirement.
- Variable Rate Bond
 - Yield calculation is segmented into periods of time.
 - The yield period may be the last day of any bond year, within the first 5 years.
 - Allows the issuer to use the most advantageous time periods for matching investment earnings to interest rates paid.

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Substance vs. Form

- Economic consequences of a transaction will generally over rule verbal characterization in controversies involving abuse of the tax laws.
- Timing, purpose, and security are the three main criteria the rules focus on.

Project
Management

Analysis

\$5,004,231.96 \$57,328.27

\$2,512,769.93 \$23,140.96

\$78,342,763.81 \$680,271.18

\$978,724.67 \$8,714.92

\$439,427.98 \$4,723.12

\$206,654.58 \$2,168.93

\$5,558,231.53 \$51,678.03

\$3,758,032.47 \$31,140.92

\$312,561.45 \$2,567.10

\$17,456,819.27 \$150,240.68

\$1,567,018.07 \$9,879.14

Data
Management

\$9,532.96

\$1,002.27

Information

People Count

Sample Calculation Summary

CALCULATION SUMMARY

Public Financing Authority
1997 Lease Revenue Bonds
\$2,620,000.00

Arbitrage Yield: 4.53195524%
Final Maturity Date: October 1, 2007

Arbitrage Rebate Liability
For the Period October 9, 1997 – October 1, 2002

Costs of Issuance	\$ 74.46
Site Lease Payment	5,108.91
Reserve	19,884.06
FV Computation Date Credit – 10/01/98	(1,196.33)
FV Computation Date Credit – 10/01/99	(1,143.90)
FV Computation Date Credit – 10/01/00	(1,093.77)
FV Computation Date Credit – 10/01/01	(1,045.83)
Computation Date Credit – 10/01/02	(1,000.00)
Total	\$ 19,587.60
Rebate Liability (90% of Total)	\$ 17,628.84

Balance of Funds/Accounts
Subject to Rebate Requirement
As of October 1, 2002

Reserve	\$ 269,672.63
Total	\$ 269,672.63

Project
Management

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Data
Management \$9,532.96
\$1,002.27

Information

People Count

Sample Fund Analysis

Fund/Account: Costs of Issuance

Exhibit C

Public Financing Authority
1997 Lease Revenue Bonds

Delivery Date 09-Oct-97
Computation Date **01-Oct-02**
Arbitrage Yield **4.53195524%**
Investment Yield 5.06061283%
Total Earnings \$ 582.63

Date	Receipts	Payments	Earnings	Balance	Future Value
09-Oct-97	\$ 69,242.82	\$ 0.00	\$ 0.00	\$ 69,242.82	\$ (86,547.39)
09-Oct-97		(3,780.00)		65,462.82	4,724.67
09-Oct-97		(6,104.68)		59,358.14	7,630.31
09-Oct-97		(29,994.62)		29,363.52	37,490.62
27-Oct-97		(4,500.00)		24,863.52	5,612.01
03-Nov-97			85.53	24,949.05	
04-Nov-97		(85.53)		24,863.52	106.57
01-Dec-97			103.15	24,966.67	
02-Dec-97		(103.15)		24,863.52	128.08
02-Jan-98			106.59	24,970.11	
05-Jan-98		(106.59)		24,863.52	131.81
02-Feb-98			106.35	24,969.87	
02-Feb-98		(106.35)		24,863.52	131.07
24-Feb-98		(6,800.00)		18,063.52	8,357.76
02-Mar-98		(4,000.00)		14,063.52	4,911.43
02-Mar-98			91.38	14,154.90	
03-Mar-98		(91.38)		14,063.52	112.19
01-Apr-98			60.71	14,124.23	
02-Apr-98		(60.71)		14,063.52	74.27
15-Apr-98		(14,063.52)		0.00	17,175.83
01-May-98			28.92	28.92	
04-May-98		(28.92)		0.00	35.24
Total Rebatable Arbitrage				\$	74.46

Project
Management

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Management

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Information

People Count

Compliance Monitoring

Agency Arbitrage Rebate Compliance Summary as of 1/31/04

Issue Date	Original Principal	Issue Name	Last Report	Liability	Next Report
10/07/1993	\$2,405,000.00	Peacock Gap Refunding	10/01/1998	(\$26,061.00)	10/01/2003
01/28/1997	\$5,250,000.00	1997 Revenue Bonds	05/31/2003	(\$42,382.16)	01/28/2007
06/30/1999	\$23,504,004.00	1999 TAB	06/30/2003	\$215,345.89	06/30/2004
12/06/2001	\$3,220,000.00	2001 Revenue, Series A	-	-	12/06/2006
10/20/2002	\$25,020,000.00	TARB Series 2002	-	-	10/20/2007
04/17/2003	\$7,605,000.00	2003 Lease Revenue Bonds	-	-	04/17/2008

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Management

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Information

People Count

Payment Requirements

- Installment Dates
 - Every 5 years from issue date or bond year
 - Bond year election – first year can be shorter than a year
 - 90% payments due within 60 days
- Final Maturity
 - Date bonds matured or redeemed early
 - 100% payment due within 60 days

Project
Management

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Information

People Count

IRS Form 8038-T

- Form 8038-T only filed when there is a positive liability and/or yield reduction payment needed.
- Check payable to US Treasury.
- Mail rebate or yield reduction payment to IRS Center in Ogden, UT.

Exceptions to Rebate



Project
Management
Analysis



Data
Management

Information
People Count

Project
Management

Analysis

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Information

People Count

Exceptions to Rebate

- Small Issuer Exception
- Spending Exceptions
- Bona Fide Debt Service Funds

Project
Management

Analysis

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Information

People Count

Small Issuer Exception

- Requirements
 - Issuer must have general taxing powers
 - Not “Private Activity” Bonds
 - 95% or more proceeds used toward local government activities
 - Aggregate tax-exempt debt must not exceed \$5 million within a calendar year

Project
Management

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Information

People Count

Small Issuer Exception for Schools

- Relates to bonds to finance construction of public school facilities
- January 1, 1998 limit increased to \$10 million
- January 1, 2002 limit increased to \$15 million
 - \$10 million must be used for construction of public school facilities
 - \$5 million for non-construction purposes (e.g. TRANS)

Project
Management

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Information

People Count

Spending Exceptions

- Six Month Spending Exception
- Eighteen Month Spending Exception
- Twenty-Four Month Spending Exception

Project
Management

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Information

People Count

Six Month Spending Exception

- Applies to any type of tax-exempt issue
- 6 months - 100% proceeds spent
- 501(c)(3) and governmental bonds have additional 6 months to spend 5% of proceeds
- Private activity bonds are not afforded the additional 6 months

Project
Management

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Management \$9,532.96
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Information

People Count

Eighteen Month Spending Exception

- Requirements
 - Applies to any type of tax-exempt issuance for a capital project including industrial bonds or qualified mortgage bonds
- Schedule
 - 6 months – 15%
 - 12 months – 60%
 - 18 months – 100%

Project
Management

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Data
Management \$9,532.96
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Information

People Count

Twenty-Four Month Spending Exception

- Requirements
 - Applies to governmental bonds, 501(c)(3), or private activity bonds used for construction purposes.
 - Issuer reasonably expects that 75% of available construction proceeds will be used for construction expenditures.
 - Construction expenditures must be on property that is to be owned by a governmental unit or 501(c)(3) organization.

Project
Management

Analysis

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Data
Management \$9,532.96
\$1,002.27

Information

People Count

Twenty-Four Month Spending Exception

- Schedule
 - 6 months – 10%
 - 12 months – 45%
 - 18 months – 75%
 - 24 months – 100%

Project
Management

Analysis

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Management \$9,532.96
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Information

People Count

De Minimis Exception and Reasonable Retainage

- 18 month and 24 month exceptions
- De Minimis Exception
 - Lesser of 3% of issue price or \$250,000
 - Exercise due diligence to complete project
- Reasonable Retainage
 - Additional 12 months to spend 5% of proceeds
 - Amount retained for business purposes relating to the financed property

Project
Management

Analysis

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Management \$9,532.96
\$1,002.27

Information

People Count

Bona Fide Debt Service Funds

- Funds used primarily to achieve a proper matching of revenue and debt service within each bond year.
- Funds must deplete annually to zero with exception of reasonable carryover amount.

Exceptions to Yield Restriction



Project
Management
Analysis



Data
Management

Information
People Count

Project
Management

Analysis

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Management \$9,532.96
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Information

People Count

Exceptions to Yield Restriction

- Temporary Periods
- Reasonably Required Reserve
- De Minimus Exception

Project
Management

Analysis

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Information

People Count

Temporary Periods

- Three Year Temporary Period
 - Within six months from issue date, issuer incurs a substantial binding obligation to a third party to expend 5% of net sale proceeds.
 - 85% of net sale proceeds expended on capital project(s) within three year period.
 - Issuer proceeds with “due diligence” to complete capital projects.
 - Project Funds, Capitalized Interest and Costs of Issuance qualify for three year temporary period.

Project
Management

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Information

People Count

Other Temporary Periods

- Five Year Temporary Period
 - Substantial amount of construction expenditures on a complex construction project.
 - Issuer and licensed architect or engineer certifies that five year period is necessary to complete capital project.
- Working Capital Expenditures/Operating Expenses have thirteen months
- Pooled Financings
 - Six Month Period to loan out proceeds.
 - Repayments from loans have only three months.

Project
Management

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People Count

After the Temporary Period

- Yield restrict remaining proceeds, or
- Yield reduction payment may be permitted under 1993 Regulations

Project
Management

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People Count

Reasonable Required Reserve Fund

- Should not exceed the lesser of
 - 10% of principal amount
 - Maximum annual debt service
 - 125% of the average annual debt service
- Excess Reserve Portion
 - Must be funded from other source such as revenues, not sale proceeds
 - Excess amount must be yield restricted

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People Count

Yield Reduction Payments

- 1993 administrative solution to yield restriction.
- Yield Reduction Payments (YRPs) are payments made to the IRS on yield restricted funds.
- Paid at same time and manner as a rebate payment.

Project
Management

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Yield Reduction Payments

- YRPs allowed for the following situations:
 - Investments qualified for an original temporary period
 - Investments restricted to a variable yield issue
 - Transferred proceeds associated with a refunding
 - Reserve fund balance in excess of reasonably required limit, but only up to 15% par
- YRPs not allowed for advance re-funding escrows

Refund Requests



Project
Management
Analysis



Data
Management

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People Count

Project
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People Count

Filing for a Refund

- Use Form 8038R for filing.
- An overpayment of less than \$5,000 may not be recovered before the final computation date.
- Overpayment can only be recovered to the extent that recovery does not result in additional rebate as of the date requested.

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People Count

Refund Rules

- 1992 Regulations
 - Generally applies to bonds issued prior to 6/30/93.
 - Only permits refunds caused by mathematical errors.
- 1993 Regulations
 - Permits refunds whenever an overpayment can be demonstrated.

Enforcement



Project
Management
Analysis



Data
Management

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People Count

Project
Management

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People Count

Recent Abuses in the News

- Yield Burning
- Improper yield blending
- Hidden fees in credit enhancements
- Bonds issued for the purpose of earning arbitrage
- GIC Bidding
- Put options in Escrow funds
- Use of SWAPS and derivatives
- Private Activity Bonds issued for the purpose of Solid Waste Disposal, Tribal Infrastructure, and Healthcare.

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\$206,654.58 \$2,168.93

\$5,558,231.53 \$51,678.03

\$3,758,032.47 \$31,140.92

\$312,561.45 \$2,567.10

\$17,456,819.27 \$150,240.68

\$1,567,818.07 \$9,879.14

Data
Management \$9,532.96
\$1,002.27

Information

People Count

How to Protect Yourself

"At some point in a bond transaction take a look at each participant in the deal and decide if you are willing to be a co-defendant with them. If the answer is no, don't do the deal."

Paraphrased from a speech given at the National Association of Bond Lawyers Bond Attorney's Workshop